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Managing Rivers for Environmental Flows:

Sustainable Rivers Project
USACE/TNC Collaboration

Lisa Morales, USACE & Andrew Warner, The Nature Conservancy

USACE Planning Community of Practice Conference
San Antonio, TX
22 May 2008

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Threats to Freshwater Ecosystems

Hydrologic Alteration

Water Quality Degradation

Invasive Species

Direct Habitat Destruction

Overharvest

Climate Change

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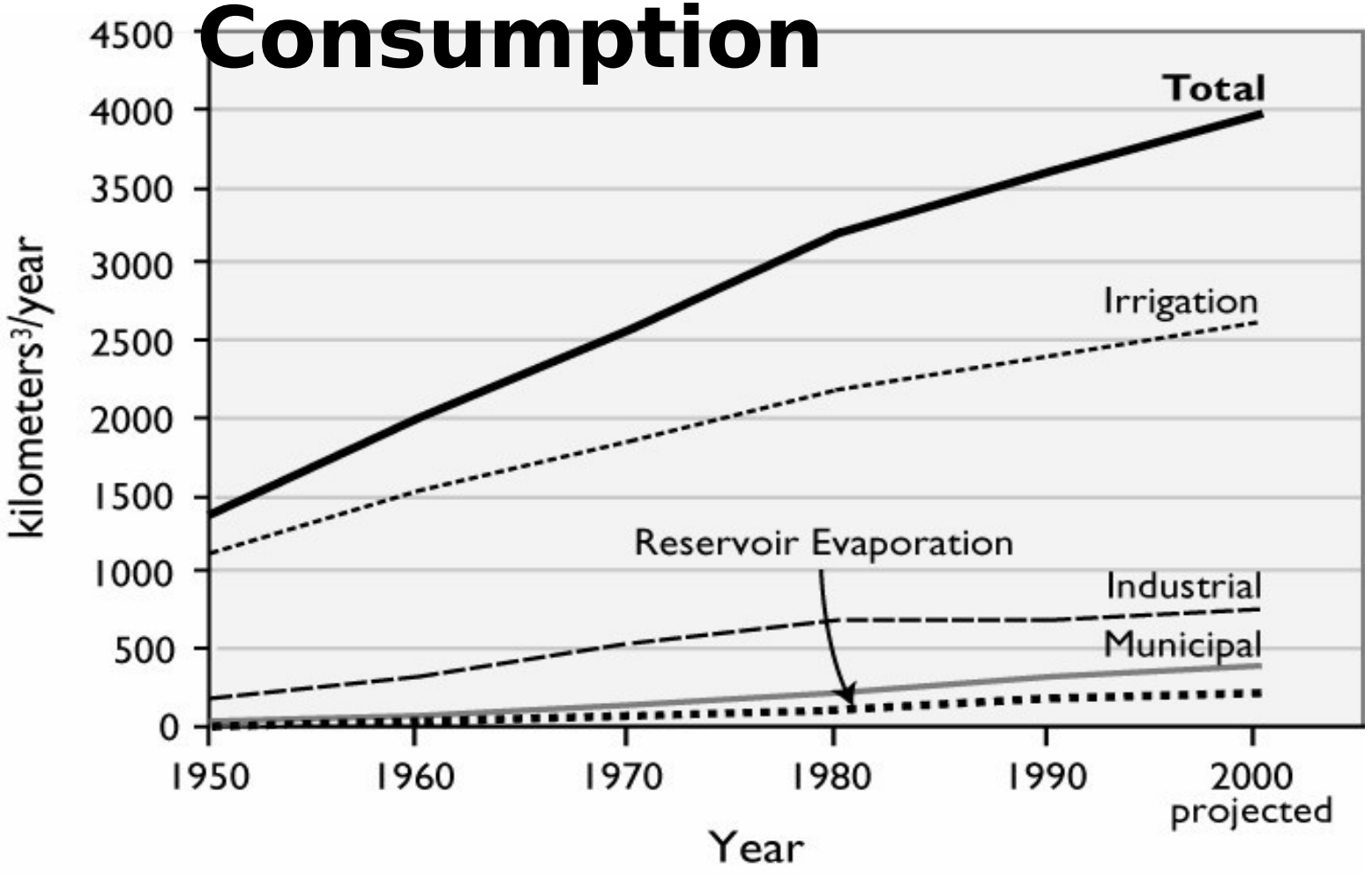
Global Water Consumption



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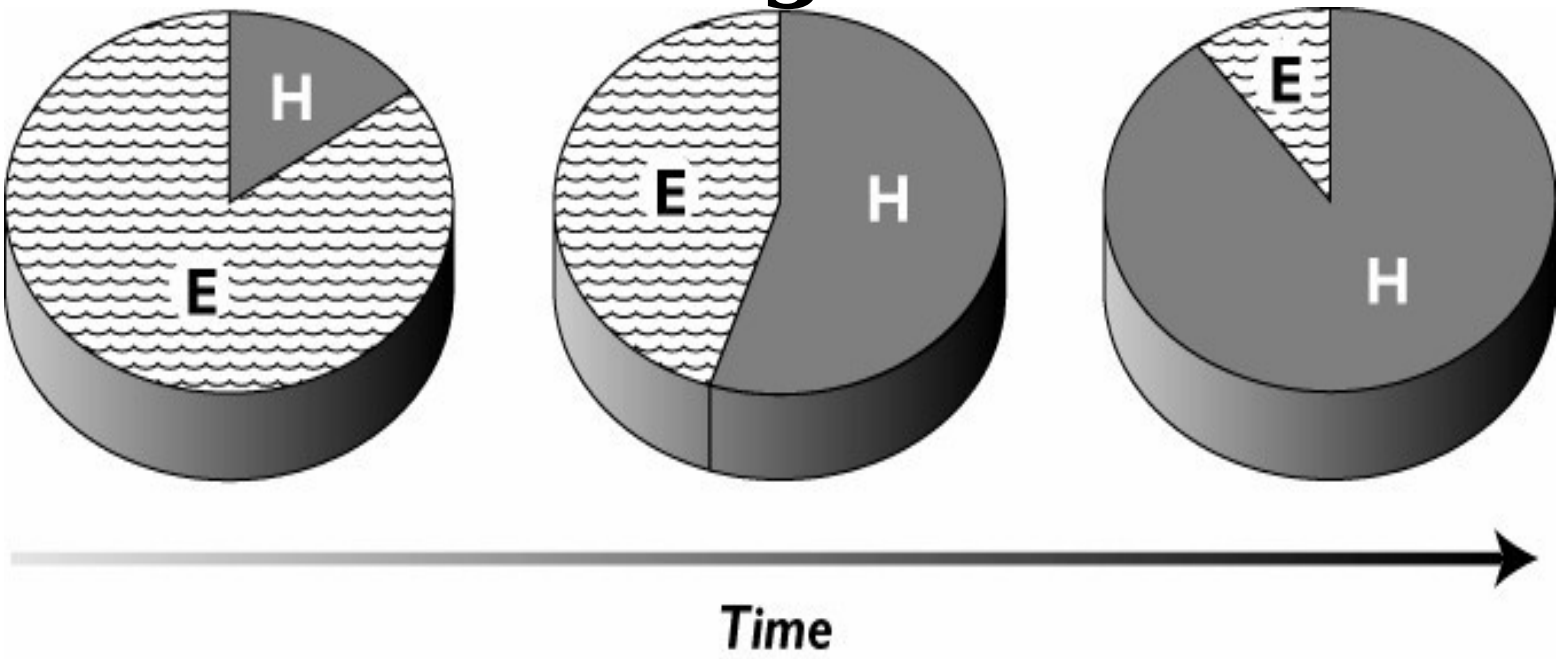
Traditional Approach to Water Management



E = ecosystem support

H = human use

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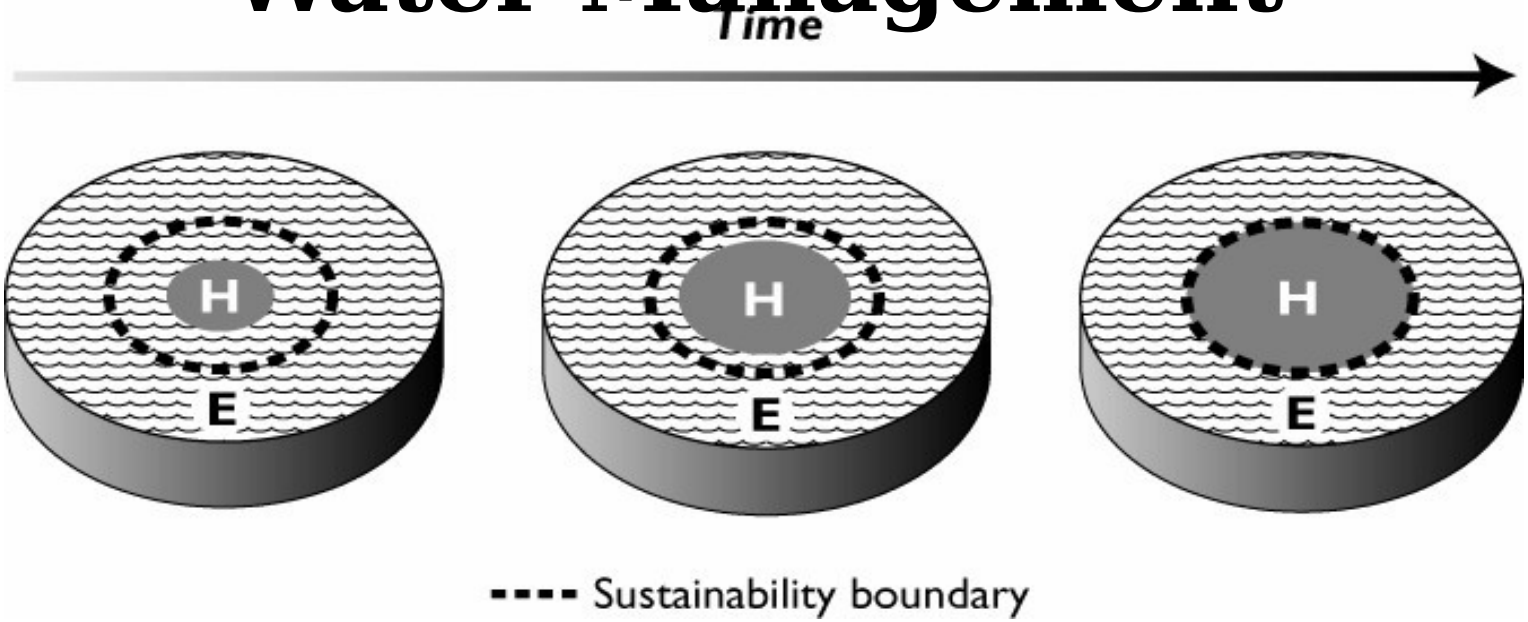
An Ecologically Sustainable Approach to Water Management



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Environmental Flows

Maintaining Natural Flow Patterns

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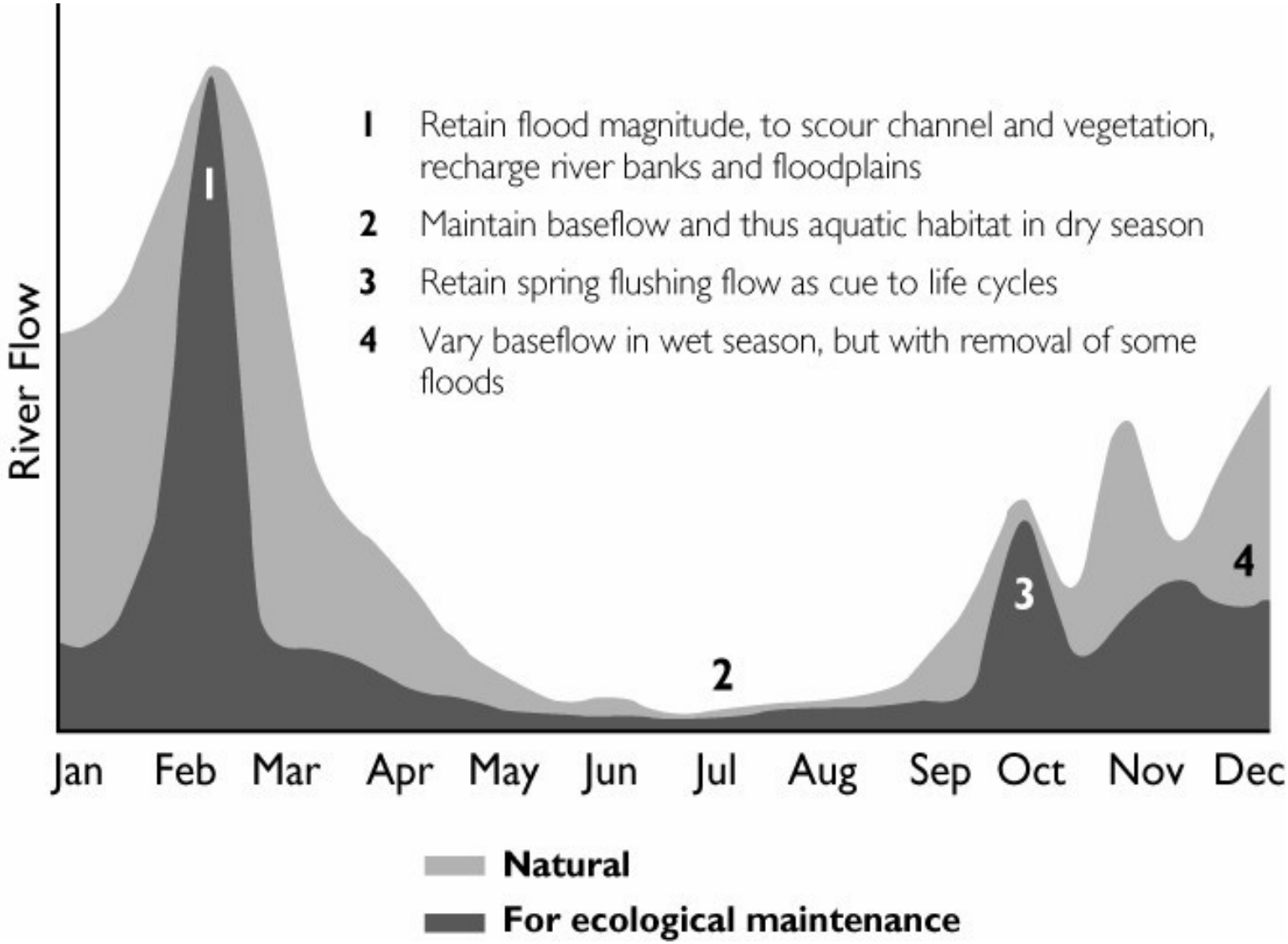
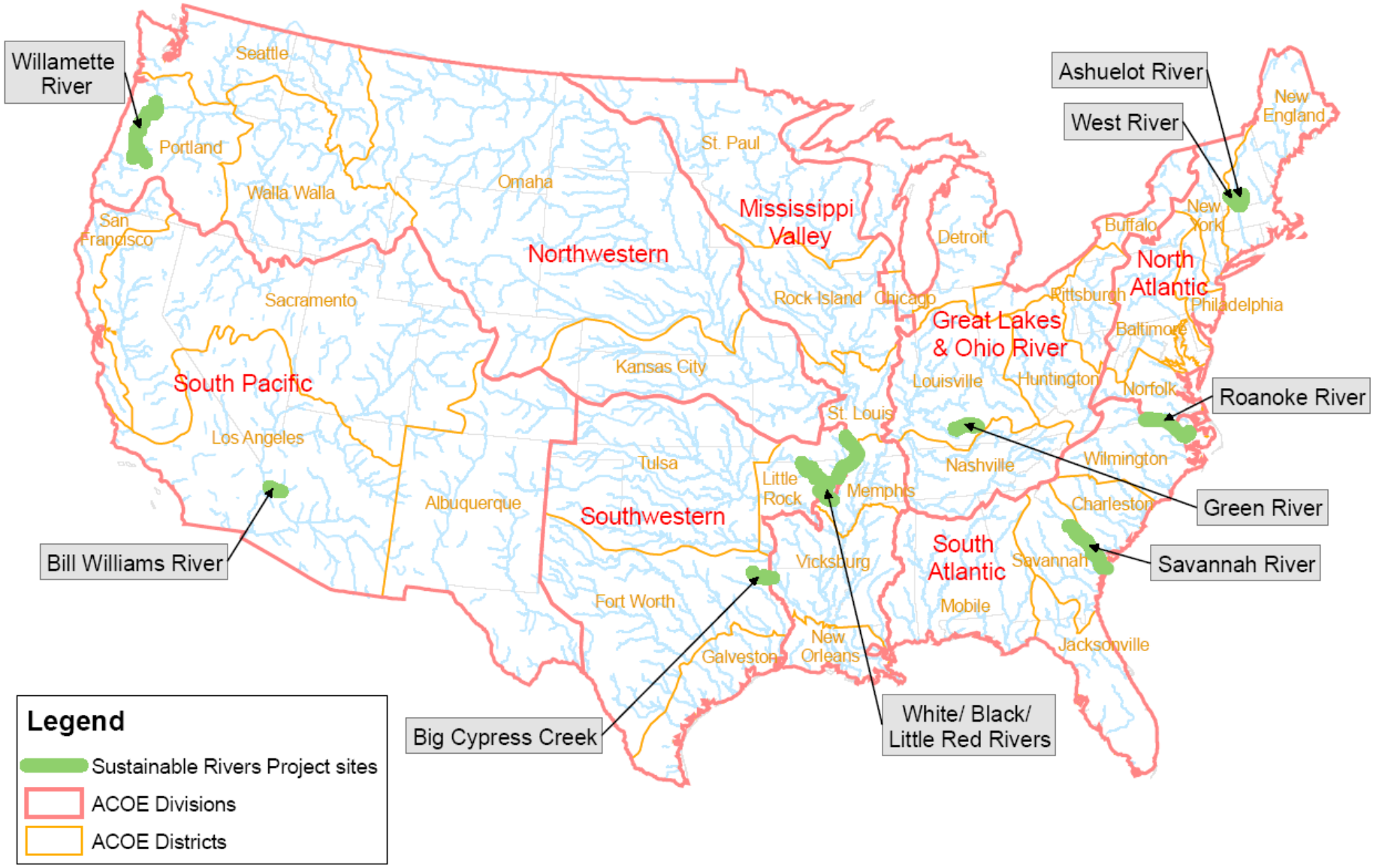

River Flow
1 Retain flood magnitude, to scour channel and vegetation, recharge river banks and floodplains
2 Maintain baseflow and thus aquatic habitat in dry season
3 Retain spring flushing flow as cue to life cycles
4 Vary baseflow in wet season, but with removal of some floods
1
2
3
4
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Natural
For ecological maintenance

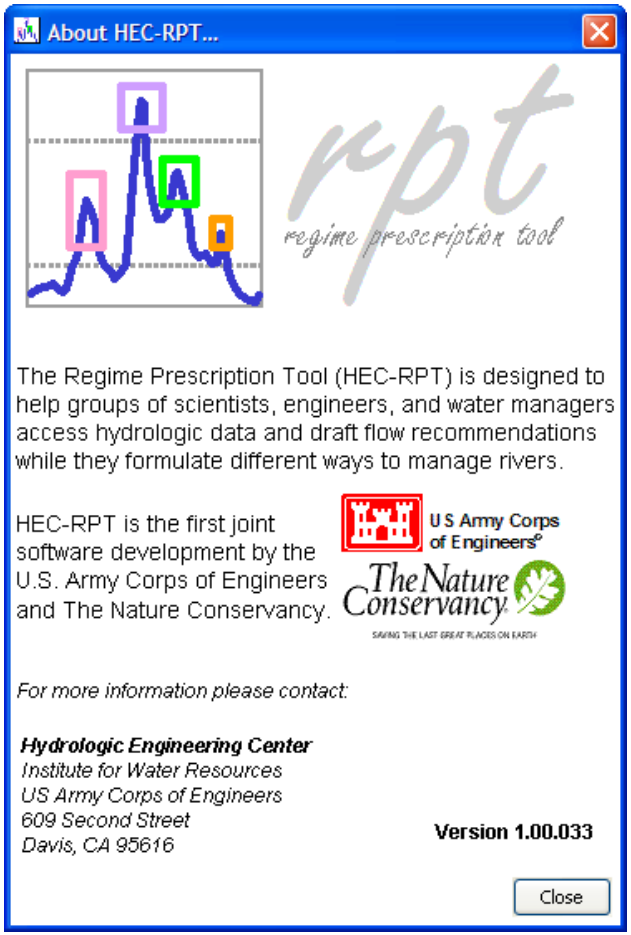
Sustainable Rivers Project

Current Sites



Sustainable Rivers Project

www.nature.org/initiatives/freshwater/partnership/


About HEC-RPT...
rpt
regime prescription tool
The Regime Prescription Tool (HEC-RPT) is designed to help groups of scientists, engineers, and water managers access hydrologic data and draft flow recommendations while they formulate different ways to manage rivers.
HEC-RPT is the first joint software development by the U.S. Army Corps of Engineers and The Nature Conservancy.
US Army Corps of Engineers
The Nature Conservancy
For more information please contact:
Hydrologic Engineering Center
Institute for Water Resources
US Army Corps of Engineers
609 Second Street
Davis, CA 95616
Version 1.00.033
Close

- ✓ Demo sites
- ✓ Software development
- ✓ Staff sharing
  (IPA, internships)
- ✓ Joint training
  (>300 Corps staff)
- ✓ Annual meetings
- ✓ Joint publications & communications

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Sustainable Rivers Proje

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"The Nature Conservancy is one of our most important partners and the *Sustainable Rivers Project*, with its nation-wide focus, is at the forefront of our collaborations."

Lt. General Carl A. Strock
51st Chief of Engineers